System and Method for Using First-Principles Simulation to Analyze a Process Performed by a Semiconductor Processing Tool

## ABSTRACT OF THE DISCLOSURE

A method, system and computer readable medium for analyzing a process performed by a semiconductor processing tool. The method includes inputting data relating to a process performed by the semiconductor processing tool, and inputting a first principles physical model relating to the semiconductor processing tool. First principles simulation is performed using the input data and the physical model to provide a first principles simulation result; and the first principles simulation result is used to determine a fault in the process performed by the semiconductor processing tool.

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